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Make sure your information is up to date.

When specifying or installing James Hardie[™] products, ensure you have the current installation guide. If in doubt, or you need more information, visit www.jameshardie.com.au or Ask James Hardie[™] on 13 11 03.

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1 INTRODUCTION

PineRidge™ lining combines the appearance of traditional timber 'board and batten' wall panelling with the benefits of modern fibre cement.

Because the baseboard is James Hardie™ fibre cement it is resistant to moisture, rotting, fire and termites when installed and maintained as directed

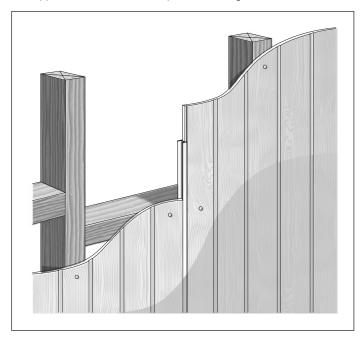
The front face of PineRidge™ lining can be painted or stained in any colour.

PineRidge™ lining can be fixed to the full height of a wall or to dado height, creating a decorative, hard-wearing, impact-resistant lining for hallways.

It is made to withstand the toughest treatment in family, rumpus and games rooms, workshops and garages.

Main features:

- Durable internal lining sheet.
- Creates suitable surface for paint or stain finishes.
- Sheet edges have a concealed jointing system using special jointers.
- Reliable impact resistant decorative lining. Ideal for wall lining applications where walls are prone to damage.



The specifier or other responsible party for the project must ensure the information and details in this guide are appropriate for the intended application and that specific design and detailing is undertaken for areas which fall outside the scope of this documentation.

TABLE 1 PINERIDGE™ LINING SIZES					
PRODUCTS	DESCRIPTION				
	PineRidge™ lining is a woodgrained internal lining board with the look of timber board and batten but with the durable benefits of fibre cement.				
	Sheet sizes: 2700mm x 1198mm x 6mm				
	100mm —				

 $^{^{\}star}\mathrm{All}$ dimensions and masses are approximate and subject to manufacture tolerances.

TABLE 2 PRODUCT / ACCESSORIES / TOOLS COMPONENTS SUPPLIED BY JAMES HARDIETM						
PRODUCT	DESCRIPTION	PRODUCT	DESCRIPTION			
	HardieBlade [™] Saw Blade. 185mm diameter A poly-diamond blade for fast and clean cutting of James Hardie [™] fibre cement. 1 each. Part No. 300660		James Hardie [™] Fibreshear Electric tool for cutting fibre cement sheets. 1 each. Part No.300653			
	Villaboard™ Knife A score and snap knife designed to efficiently cut through fibre cement sheets ≤9mm thick.12 per box. Part No. 305915.		James Hardie [™] PVC Internal Corner Angle for 6mm thick sheets. 3,000mm long. A PVC extrusion to be used with 6mm thick sheets at internal corner junctions to conceal the sheet edge. 25 per pack. Part No. 305545			
	HardieDrive™ Screw 25mm long A class 3 self-tapping wing-tipped screw for fastening to 0.5mm to 1.6mm BMT light gauge steel frames. 1000 per box. Part No. 305979		James Hardie [™] PVC External Corner Angle for 6mm thick sheets. 3,000mm long. A PVC extrusion to be used with 6mm thick sheets at external corner junctions to conceal the sheet edge. 25 per pack. Part No. 305544			
	HardieDrive™ Collated Screw 25mm long A class 3 self-tapping wing-tipped screw for fastening to 0.5mm to 1.6mm BMT light gauge steel frames. Suitable for use in most auto feed screw guns. 1000 per box. Part No. 305980		PineRidge™ PVC Jointer. 2,700mm long. A PVC extrusion used to join 6mm thick PineRidge™ lining. 25 per box. Part No. 305539			
COMPONENTS NOT SUPPLIED BY JAMES HARDIE James Hardie recommends the following products for use in conjunction with its PineRidge™ lining. James Hardie does not supply these products and does not provide a warranty for their use. Please contact the component the manufacturer for information on their warranties and further information on their products.						
	Galvanised fibre cement nails 30mm x 2.8 galvanised fibre cement nails for fastening to timber.		Stud adhesive Use to fix James Hardie™ PineRidge™ lining to timber or metal framing			
	Underlay nails Use 25mm x 2.5mm ring shank underlay nails, for fastening to timber. Used where smaller head sized fasteners are desired.		Hand guillotine Guillotine for cutting fibre cement.			

2 SAFE WORKING **PRACTICES**

WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

James Hardie™ products contain sand, a source of respirable crystalline silica which is considered by some international authorities to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) minimise dust when cutting by using either 'score and snap' knife, fibre cement shears or, where not feasible, use a HardieBlade™ saw blade (or equivalent) and dust-reducing circular saw attached to an appropriate, well maintained, filtered vacuum; (3) warn others in the immediate area to avoid breathing dust; (4) wear a properly-fitted, approved dust mask or respirator (e.g. P1 or P2) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During clean-up use a vacuum and filter, both of which are well maintained and appropriate for capturing fine (respirable) dust. Alternatively, use wet clean-up methods - never dry sweep. For further information, refer to our installation instructions and Safety Data Sheets available at www. jameshardie.com.au. FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

JAMES HARDIE™ RECOMMENDED SAFE WORKING PRACTICES

CUTTING OUTDOORS

- 1. Position cutting station so wind will blow dust away from the user or others in working area.
- 2. Use one of the following methods based on the required cutting rate:

- Score and snap Hand guillotine Fibreshear
- Better Position the cutting station in a well-ventilated area. Use a dust reducing circular saw equipped with HardieBlade™ Saw Blade or comparable fibre cement blade and well maintained vacuum and filter appropriate for capturing fine (respirable) dust...

CUTTING INDOORS

- Cut only using score and snap, hand guillotine or fibreshears (manual, electric or pneumatic).
- · Position cutting station in a well-ventilated area.

REBATING/SANDING/DRILLING/OTHER MACHINING

When rebating, sanding, drilling or machining you should always wear a P1 or P2 dust mask and warn others in the immediate area.

IMPORTANT NOTES

- 1. For maximum protection (lowest respirable dust production), James Hardie recommends always using best practice cutting methods where feasible.
- 2. NEVER use a power saw indoors.
- 3. ALWAYS use a circular saw blade that carries the HardiBlade™ logo or is of at least comparable performance.
- 4. NEVER dry sweep use wet suppression or appropriate vacuum and filter.
- 5. NEVER use grinders.
- 6. ALWAYS follow tool manufacturer's safety recommendations.

DUST MASKS AND RESPIRATORS

James Hardie recommends the use of P2 respirators as best practice. As a minimum, an AS/NZS1716 P1 respirator must be used when doing any activity that may create dust. For more extensive guidance and options for selecting respirators for workplaces please refer to Australian/New Zealand Standard 1715:2009 "Selection, Use and Maintenance of Respiratory Protective Equipment".

P1 or P2 respirators should be used in conjunction with the above cutting practices to minimise dust exposure.

For further information, refer to Safety Data Sheet (SDS) available at www. jameshardie.com.au. If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.

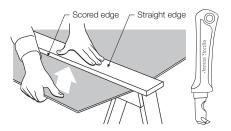
WORKING INSTRUCTIONS

Refer to recommended safe working practices before starting any cutting or machining of product.

Score and snap

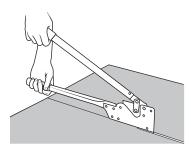
Score and snap is a fast and efficient method of cutting James Hardie™ building products using Villaboard™ score and snap knife.

Preferably score on the face side of the product. Score against a straight edge and repeat the action to obtain adequate depth for a clean break normally one third of sheet thickness. Snap upwards to achieve break. Smooth any rough edges with a rasp.



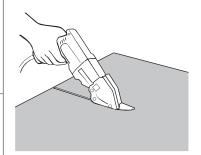
Hand guillotine

Make quillotine cut on the off-cut side of line to allow for the thickness of the blade.



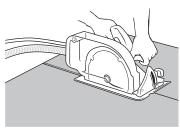
Fibreshear

An electrically powered, fast, clean and effortless way of cutting James Hardie™ building products, especially around curves such as archways. Make fibreshear cut on the 'off-cut' side of the line to allow for the thickness of the shear.



HardieBlade™ saw blade

The HardieBlade™ saw blade used with a dust-reducing saw and HEPA vacuum extraction allows for fast, clean cutting of James Hardie™ fibre cement products. A dust-reducing saw uses a dust deflector or a dustcollector which can be connected to a vacuum system. When sawing, clamp a straight-edge to the sheet as a guide and run the saw base platealong the straight edge when making the cut.



HOLE-FORMING

For smooth clean cut circular holes:

- Mark the centre of the hole on the sheet.
- Pre-drill a pilot hole.
- Using the pilot hole as a guide, cut the hole to the appropriate diameter with a hole saw fitted to a heavy duty electric drill.

For irregular holes:

- · Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face.
- Tap carefully to avoid damage to sheets, ensuring the sheet edges are properly supported.



STORAGE AND HANDLING

To avoid damage, all James Hardie™ building products should be stored with edges and corners of the sheets protected from chipping. James Hardie™ building products must be installed in a dry state and protected from rain during transport and storage. The product must be laid flat under cover on a smooth level surface clear of the ground to avoid exposure to water, moisture, etc.

QUALITY

James Hardie conducts stringent quality checks to ensure any product manufactured falls within our quality spectrum. It is the responsibility of the builder to ensure the product meets aesthetic requirements before installation. James Hardie will not be responsible for rectifying obvious aesthetic surface variations following installation.

3 FRAMING

4 INSTALLATION

GENERAL

 ${\sf PineRidge^{\rm TM}\ lining\ can\ be\ fixed\ to\ either\ timber\ or\ light\ gauge\ domestic}}$ type steel framing. The framing used must comply with the relevant building regulations, standards and the requirements of this guide.

PineRidge™ lining must not be used in shower areas.

Use only seasoned timber. Unseasoned timber must not be used as it is prone to shrinkage and can cause PineRidge™ lining and frames to move. The minimum stud width is typically 35mm. However when butt jointing is used, the minimum stud width is 38mm.

'Timber used for house construction must have the level of durability appropriate for the relevant climate and expected service life and conditions including exposure to insect attacks or to moisture, which could cause decay.

Reference AS1684.2 'Residential Timber Framed Construction'.

The minimum size for steel stud framing should be 64mm deep x 0.55mm Base Metal Thickness (BMT). Steel framing must be designed in accordance with AS/NZS 4600 'Cold Formed Steel Structures.' Steel sections should be galvanised or zinc coated with a minimum BMT of 0.55mm and no thicker than 1.6mm BMT. studs must not be less than 38mm wide.

PREPARATION

Ensure frame is square. Work from a central datum line. Frames must be straight and true to provide a flush face to receive the sheeting.



FIGURE 1 FRAME STRAIGHTNESS

A suggested maximum tolerance of between 3mm and 4mm in any 3000mm length of frame will give best results. PineRidge™ lining will not straighten excessively warped or distorted frames, and any warping may still be visible after the internal lining is installed.

SHEET LAYOUT

PineRidge™ lining is usually fixed vertically. Sheets may be joined on or off a stud. If joining sheets on a stud, the sheet edge must align with the centre of the framing member. If joining sheets off a stud, ensure an adequate row of noggings are provided.

The long edges of the sheet have a unique rebated edge which fits into a special jointer. This sheet joint looks like the battens along the face of the sheet, achieving a concealed joint.

NOTE

Where fixing half height sheets as a dado wall, provide a row of noggings to allow for fastening of the sheet edge.

FASTENERS

TIMBER FRAME FASTENER SELECTION 6mm PineRidge™ lining 30mm x 2.8mm Galvanised FC

* If a smaller head size is desired for aesthetic reasons use 25mm x 2.5mm ring shank underlay nails. Only suitable for low traffic areas.

STEEL FRAME FASTENER SELECTION				
	0.5mm-1.6mm BMT			
6mm PineRidge™ lining	HardieDrive™ screw 25mm			

NOTE

Do not place nails or screws within 100mm of the adhesive daubs.

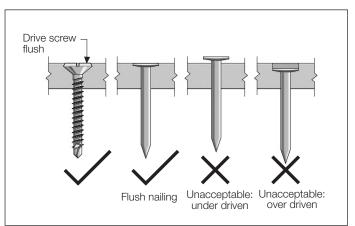


FIGURE 2 FASTENER DEPTH

5 FIXING

GENERAL

Place 6mm packers along floor as temporary support for sheets. This allows provision for frame movement. PineRidge™ lining is installed by joining the sheets off stud using the PineRidge™ PVC jointer. Fix the sheet starting from the centre of sheet and working outwards to avoid any druminess. When installing full sheets of PineRidge™ lining, use either the fastener or fastener/adhesive methods shown in Figures 3 and 4 respectively. For dado (half wall height sheeting) installation, see Figure 5.

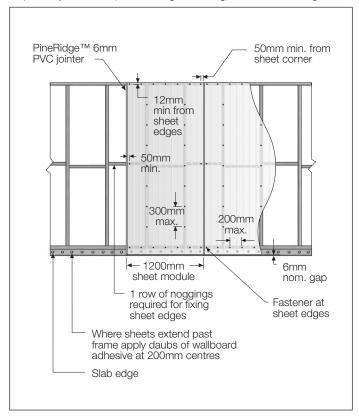


FIGURE 3 FASTENER FIXING METHOD

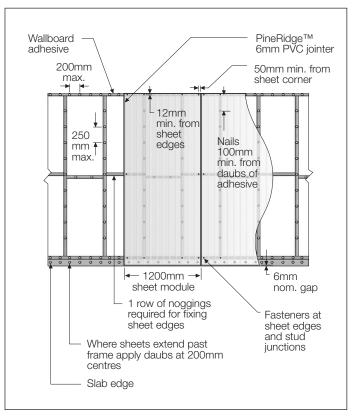


FIGURE 4 FASTENER / ADHESIVE METHOD

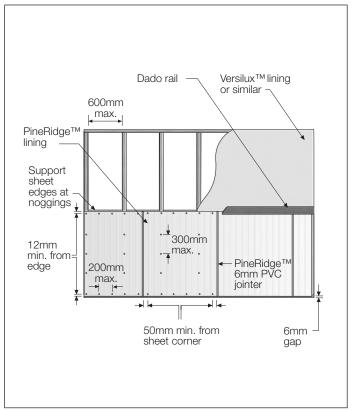


FIGURE 5 DADO HEIGHT FIXING

6 JOINTING

 $\label{eq:pineRidge} \mbox{PineRidge} \mbox{$^{\text{TM}}$ lining is joined by using the concealed jointing strip which fits}$ the rebated edge of the sheet. Once painted, the sheet joint resembles a batten as found elsewhere on the sheet. See Figures 6 to 9.

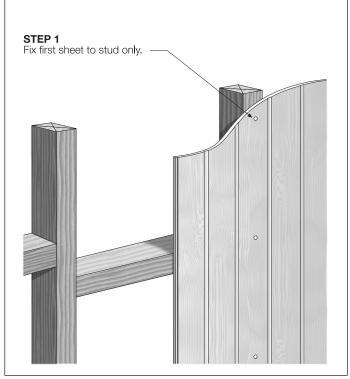


FIGURE 6 FIX FIRST SHEET

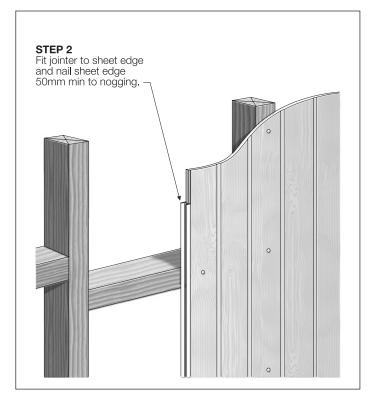


FIGURE 7 FIX JOINTER

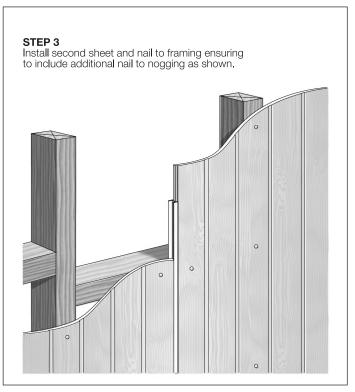


FIGURE 8 FIX NEXT SHEET

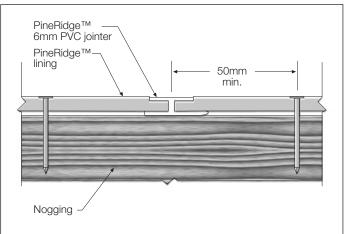
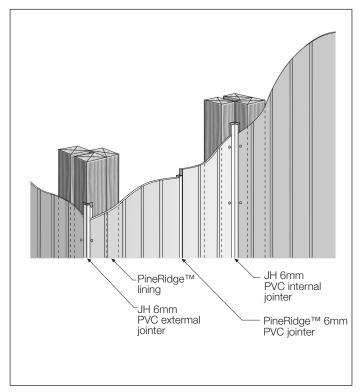


FIGURE 9 SHEET JOINT DETAIL

7 CORNERS

External and internal corners are created by using 6mm PVC corner jointers as shown, see Figures 10 to 12. Alternatively a suitable timber moulding may be used.



JH 6mm PVC internal jointer PineRidge™ Framing lining

FIGURE 10 INTERNAL AND EXTERNAL CORNERS

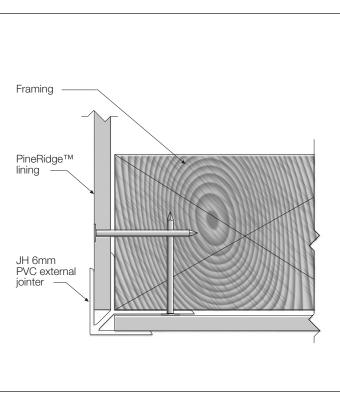


FIGURE 11 EXTERNAL CORNER

FIGURE 12 INTERNAL CORNERS

8 GARAGE STEP-DOWN

PineRidge™ lining is often used as a lining in garage applications. Refer to Figure 13 for a typical step - down detail.

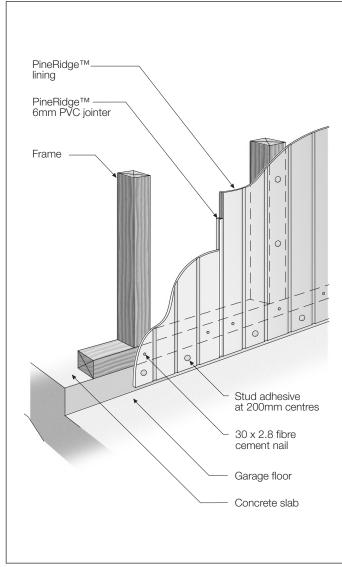


FIGURE 13 GARAGE SLAB EDGE STEP DOWN

9 PRODUCT INFORMATION

GENERAL

The basic composition of James Hardie™ building products is Portland cement, ground sand, cellulose fibre, water and proprietary additives.

James Hardie™ building products are manufactured AS/NZS 2908.2 'Cellulose-Cement Products-Flat Sheet'. These are also compliant with equivalent standard ISO 8336 'Fibre-cement flat sheets - Product specification and test methods'. For product classification refer to the relevant Physical Properties Data Sheet.

PRODUCT MASS

Based on equilibrium moisture content the approximate mass of PineRidge™ lining is 8.1kg/m².

DURABILITY

Resistance to moisture/rotting

PineRidge™ lining has demonstrated resistance to permanent moisture induced deterioration (rotting) by passing the following tests in accordance with AS/NZS 2908.2:

- Water permeability (Clause 8.2.2)
- Warm water (Clause 8.2.4)
- Heat rain (Clause 6.5)
- Soak dry (Clause 8.2.5)

Resistance to fire

PineRidge™ lining is suitable where non-combustible materials are required in accordance with C1.9 of the National Construction Code (NCC).

James Hardie™ building products have been tested by CSIRO in accordance with AS/NZS 3837 and are classified as conforming to Group 1 material (highest and best result possible), with an average specific extinction area far lower than the permissible 250m²/kg, as referenced in Specification C1.10a of the National Construction Code (NCC).

Resistance to termite attack

Based on testing completed by CSIRO Division of Forest Products Report Numbers FP349 and FP274 James Hardie™ fibre cement has demonstrated resistance to termite attack.

FINISHES

Once PineRidge™ lining has been fixed in place, finish with a suitable paint or stain system. Refer to the paint manufacturer for paint suitability, mixing and application.

If staining PineRidge™ lining, care must be taken to ensure the desired finish is achieved. It is advisable to test the stain on an off-cut, paying particular attention to fasteners and filled areas.

MAINTENANCE

James Hardie recommends that cleaning and maintenance of PineRidge™ lining be undertaken regularly as per the recommendations of the coating manufacturer. Joints must also be maintained and be free of dirt and grime.

WARRANTY

For Warranty information visit www.jameshardie.com.au or call James Hardie on 13 11 03.

NOTES



For information and advice call 13 11 03 | jameshardie.com.au

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